DOI: 10.53469/jtpes.2024.04(04).06

A Review on Mechanical Automation Control System

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Abstract: ***With the continuous improvement of our country's economic strength, the level of industrial technology is also continuous progress, our country began the development of mechanical automation. In this paper, the mechanical automation control system is summarized, to understand its definition and working principle, the characteristics of mechanization automatic technology analysis, clear mechanical automation control system development points.***

Keywords: Mechanical Automation Control System; Mechanical Automation Technology.

1. INTRODUCTION

With the rising of our country's comprehensive national strength, the development of industrial technology has reached the peak of mechanical automation technology played an important role in industrial production, the application of mechanical automation control system in line with the national conditions in our country, from set out actually, vigorously develop mechanical automation technology, makes our country's mechanical automation control system continuously perfect and development, This paper mainly discusses the mechanical automation control system, starting from the definition and working principle of mechanical automation control system, showing the characteristics of mechanical automation technology, the development of mechanical automation control system points for detailed analysis and discussion.

2. OVERVIEW OF MECHANICAL AUTOMATION CONTROL SYSTEM

Mechanical automation control refers to the process of automatic control of things by using machinery and other devices in accordance with the established law of change without human intervention. Mechanical automation is the earliest invention of automatic control system, he introduced industrial production into a new field. Mechanical automation control system is the main body of machinery, mechanical and electrical integration system is composed of modern mechanical facilities and automation system. Mechanical automatic control system can be divided according to the input feedback of automatic control system, signal type and the amount of input and output variables in the control process. When the control system detects an input and reports it back to its superiors, the process is called a closed-loop control system. When the signal type in the system is time continuous function, it is called continuous control system, when the signal type in the system is discrete signal, it is called discrete control system. When the amount of input and output variables in the control process is a single, it is called a single variable control system.

2.1 mechanical automation technology characteristics

(1) The networking of mechanical automation technology

With the continuous improvement of the level of science and technology, our country ushered in the era of "Internet +", now the Internet technology has become a widely used technology in People's Daily life, making the mechanical automation technology presents the characteristics of the network. the Internet technology and the integration of mechanical automation technology, make all kinds of mechanical automation technology under the impetus of the Internet technology has realized the transparent, sharing, for the development of mechanical automation industry provides mutual exchanges and learning platform, makes the machinery automation enterprise production and management of the great changes have taken place, from the traditional manual production mode into mechanical automation, It reduces the intensity of industrial production, enhances the efficiency of mechanical automation technology, simplifies the process of industrial production, optimizes the industrial chain, and produces huge economic and social benefits. [1]

Virtualization of mechanical automation technology with the continuous improvement of economic strength, our country's science and technology level constantly innovate, thus developed a virtualization technology, it uses the computer to product production, and product testing to simulate the actual process of analysis, the virtualization technology and machinery automation technology, can effectively demonstrates the whole process of product production and processing, transparent and open. And effective to test the product, can effectively optimize the product production and testing process, avoid the waste of manpower and material resources, financial resources and time for raw materials can be fully used, tested the product is unqualified, to deal with the unqualified products, thus effectively improved the production efficiency and the quality of the products, it avoids the waste of enterprise resources and promotes the development of mechanical automation technology in our country.

2.2 The main points of the development of mechanical automation control technology

(1) Pay attention to communication and practice in all links

In the process of the development of mechanical automation control technology, attention should be paid to the communication and practice of each link. Mechanical design personnel for effective communication and exchanges, to perfect the design of the mechanical production, meet the requirements of the market and the enterprise in our country to carry on the design of product upgrades, better with mechanical equipment matching, improve the efficiency of mechanical production, to ensure the safety of the staff of life, our country is now in the age of intelligence, informationization, To mechanical automation control technology continuously improve and innovate, keep up with the trend of the era development, mechanical design of equipment to timely know, clearly know operation process and the results after operation, ensure mechanical equipment running smoothly, when the production process, the emergency, mechanical automation control system can timely monitoring, found the problem, And timely judgment processing, the occurrence of problems timely feedback to the superior, to ensure the effective operation of mechanical automation control process.

2.3 The development trend of mechanical automation control

Machinery automation technology development more rapidly, has the characteristics of network and virtualization, and the Internet technology and the integration of technology in Sydney, has wider scope of application, from the point of view of the overall industrial development situation, the development of mechanical automation control from manual operation to mechanical automation process, from the cumbersome to streamline, from slow to rapid development, From the operation mode complex to convenient, simple, efficient, for the emergence of problems can be timely feedback and reported processing, the introduction of advanced equipment and regular inspection and repair, to ensure the smooth operation of the mechanical automation control system, the operation process is safe, stable and reliable. Effectively protect the safety of the body and property of the staff, mechanical automation control system can also monitor the production and testing of products in real time. the development of mechanical automation control system should conform to the national conditions of our country, comply with the needs of enterprises and society, carry out practical mechanical automation, innovation of mechanical automation control system, abide by the principle of sustainable development, promote the development process of mechanical automation in Our country. [2]

3. INTRODUCING ADVANCED TECHNOLOGY

In mechanical automation technology in the process of development, to introduce advanced technology, make mechanical automation control system in the direction of intelligent automation development, reference of the advanced technology can effectively simplify the operating mode, the existing Internet technology and virtualization technology effectively into the mechanical automation control system, realize the automatic control system of mechanical innovation, Will gradually shift from the manual operation of mechanical automation process for mechanical automation development, operation is simple, quick, the efficiency of industrial production, made mechanical automation technology toward the direction of intelligent, digital, follow the principle of sustainable development, and the development of mechanical automation needs to accord with our country's specific national conditions, the introduction of advanced technology,

Can increase the innovation of mechanical automation control, make full use of the advantages of mechanical automation control, reasonable upgrade and innovation of mechanical automation technology, promote the development of our country's mechanical automation control system.

4. CONCLUSION

To sum up, in this paper, the working principle of mechanical automation control system and an outline of definition, analysis of mechanical characteristics of the automatic technology of networking, virtualization, clear the development of mechanical automation control system of main points, the application of mechanical automation control system, the development of industry of our country has made the reform and innovation, meet the demand of enterprises and the development of the society, Improve the competitiveness of enterprises in the market, realize the automatic production of machinery in our country's industrial industry, improve the production efficiency, and promote the development of our country's industry.

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